

FIG. 1A

[illegible]

FIG. 1B

GGCCCCGTA CTTCG CACCCCA TACGAGCCCTTCCCGACGGAGTGC GTTCTCTATGA
 -----+-----+-----+-----+-----+-----+-----+-----
 CCGGGCATGAAGCGTGGGGGTATGCTCGGGGAAGGCTGCCCTCAGCGCAAGAAGATACT
 G P Y F A P P Y E P L P D G V R F F Y E
 240 260 280

AGGAAGCCCTGTGAGATTGAGCGTGCCAGCGGAGGAGGTCCCCACTTTTATGGGAGGAT
 -----+-----+-----+-----+-----+-----+-----+-----
 TCCTTCGGGACACTCTAACTCGCACGGTCGCCCTCCTCCAGGGGTGAAAAATACCCCTCCTA
 G R P V R L S V P A E E V P T F Y G R M
 300 320 340

GTTAGATCATGAATACACAACAAGGAGGTTTCCGGGAAGAACTTCTCAATGACTGGCG
 -----+-----+-----+-----+-----+-----+-----+-----
 CAATCTAGTACTTATGTGTGTTTCCTCCAAAAGGCCCTTCTTGAAGAAGTTACTGACCCGC
 L D H E Y T T K E V F R K N F F N D W R
 360 380 400

AAAGGAAATGGCGGTGGAAGAGAGAGGGAAGTCATCAAGAGCCCTGGACAAGTGTGACTTCAC
 -----+-----+-----+-----+-----+-----+-----+-----
 TTTCCTTTACCGCCACCTTCTCTCCCTTCAGTTAGTTCTCGGACCTGTTCACTGAAGTG
 K E M A V E E R E V I K S L D K C D F T
 420 440 460

FIG. 1C

```

      .      .      .      .      .      .      .      .      .      .
GGAGATCCACAGATACTTTGTGGACAAGGCCGACGCCGGAAGTCTCTGAGCAGGGAGGA
-----+-----+-----+-----+-----+-----+-----+-----
CCTCTAGGTGCTATGAACACCTGTTCGGCGTCCGGCCTTTCAGGACTCGTCCCTCCT
E I H R Y F V D K A A A R K V L S R E E
480                                     520

      .      .      .      .      .      .      .      .      .      .
GAAGCAGAAGCTAAAGAAGAGGCGAGAAAACCTCAGCAAGAGTTCGGCTACTGTATTT
-----+-----+-----+-----+-----+-----+-----+-----
CTCGTCTTCGATTTCTTCTCCGCTCTTTTGAAGTCGTCTCAAGCCGATGACATAAAA
K Q K L K E E A E K L Q Q E F G Y C I L
540                                     580

      .      .      .      .      .      .      .      .      .      .
AGATGGTCACCAAGAAAAATAGGCAACTTCAAGATTGAGCCGCCCTGGCTTGTCCCGTGG
-----+-----+-----+-----+-----+-----+-----+-----
TCTACCAAGTGGTTCTTTTATCCGTTGAAGTCTAACTCGGGGACCGAACAAGGCACC
D G H Q E K I G N F K I E P P G L F R G
600                                     640

      .      .      .      .      .      .      .      .      .      .
CCGTGGCGACCATCCCAAGATGGGGATGCTGAAGAGAAGGATCACGCCAGAGGATGTGTT
-----+-----+-----+-----+-----+-----+-----+-----
GGCACCGCTGGTAGGGTTCTACCCCTACGACTTCTCTTCTTAGTGGGTCTCCTACACCA
R G D H P K M G M L K R R I T P E D V V
660                                     700

```

FIG. 1D

TATCAACTGCAGCAGGACTCGAAGATCCCCGAGCCGGCGCGGACCAAGTGAAGGA
 -----+-----+-----+-----+-----+-----+-----+-----
 ATAGTTGACGTCGTCCTGAGCTTCTAGGGGCTCGGGGGCGGCCCGGTCAACCTTCCT
 I N C S R D S K I P E P P A G H Q W K E
 720 740 760

 GGTGCGCTCCGATAACACCGTCAAGTGGCTGGCAGCTTGGACCGAGAGCGTTCAGAACTC
 -----+-----+-----+-----+-----+-----+-----+-----
 CCACGCGAGGCTATGTGGCAGTGACCGACCGTCCGAACCTGGCTCTCGCAAGTCTTGAG
 V R S D N T V T W L A A W T E S V Q N S
 780 800 820

 CATCAAGTACATCATGCTGAACCCCTTGCTCGAAGCTGAAGGGGAGACAGCTTGGCAGAA
 -----+-----+-----+-----+-----+-----+-----+-----
 GTAGTTCATGTAGTACGACTTGGGAACGAGCTTCGACTTCCCCCTCTGTGCAACCGTCTT
 I K Y I M L N P C S K L K G E T A W Q K
 840 860 880

 GTTTGAACAGCTCGACGCCTGCGGGGATTGTGGACGAGATCCGCTCCCAGTACCGGGC
 -----+-----+-----+-----+-----+-----+-----+-----
 CAAACTTTGTGAGCTGCGGACGCCCTTAACACACTGCTCTAGGCGAGGTGATGGCCCCG
 F E T A R R L R G F V D E I R S Q Y R A
 900 920 940

FIG. 1E

TGACTGGAAGTCTCGGGAAATGAAGACGAGACGGCGGTGGCCCTGTATTTCATCGA
-----+-----+-----+-----+-----+-----
ACTGACCTTCAGAGCCCCTTTACTTCTGCTCTGTCGCCCGCCACGGGCATAAAGTAGCT
D W K S R E M K T R Q R A V A L Y F I D
960 980 1000

TAAGCTGGCACTGAGAGCAGGAATGAGAAGGAGACCGTGAGGCCGCACACCGTGGG
-----+-----+-----+-----+-----+-----+
ATTGACCGTGACTCTCGTCCTTTACTCTTCTCCCTGCCACTCGCGCGGTGTGGCACCCC
K L A L R A G N E K E D G E A A D T V G
1020 1040 1060

CTGCTGTCCCTCCGGTGAGCACGTCCAGCTGCACCCGGAGGCCGATGGTTGCCAACA
-----+-----+-----+-----+-----
GACGACAAGGAGGCGCACCTCGTGCAGTGCAGCTGGGCTCCTCCGCTACCAACGGTTGT
C C S L R V E H V Q L H P E A D G C Q H
1080 1100 1120

CGTGTGGAATTGACTTCCTGGGAAGGACTGCA'TCCGCTACTACAACAGAGTCCCGGT
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
GCACCACCTTAAACTGAAGGACCCCTTCCTGACGTAGGGATGATGTGTCTCACGGCCA
V V E F D F L G K D C I R Y Y N R V P V
1140 1160 1180

FIG. 1F

```

      .      .      .      .      .      .      .      .      .      .
GGAGAACCGGTGTACAAGAACTTACAGCTCTTTATGGAGAAACAAGACCCCGGACGA
-----+-----+-----+-----+-----+-----+-----+-----
CCTCTTCGGCCACATGTTCTTGAATGTCGAGAAATACCTCTTGTTCCTGGGGCCCTGCT
E K P V Y K N L Q L F M E N K D P R D D
1200                               1220                               1240

      .      .      .      .      .      .      .      .      .      .
CCTCTTCGACAGGCTGACCAAGACCAAGCCTGAACAAGCAACCTCCAGGAGCTGATGGACGG
-----+-----+-----+-----+-----+-----+-----+-----
GGAGAAAGCTGTCCGACTGGTGTGGTCGGACTTGTTCGTGGAGGTCCCTCGACTACCTGCC
L F D R L T T T S L N K H L Q E L M D G
1260                               1280                               1300

      .      .      .      .      .      .      .      .      .      .
GCTGACGGCCAAAGTGTTCCGGACCTACAACGCCCTCCATCACTCTGCAGGAGCAGCTGCG
-----+-----+-----+-----+-----+-----+-----+-----
CGACTGCCGGTCCACAAGCCCTGGATGTTCGGAGGTAGTGAGACGTCCTCGTCGACGC
L T A K V F R T Y N A S I T L Q E Q L R
1320                               1340                               1360

      .      .      .      .      .      .      .      .      .      .
GGCCCTGACGCGCGCGGAGACAGCATAGCAGCTAAGATCTTATCCTACAACCGAGCCAA
-----+-----+-----+-----+-----+-----+-----+-----
CCGGGACTGCCGCGCGGCTCCTGTGCGTATCGTCGATCTAGAAATAGGATGTTGGCTCGGTT
A L T R A E D S I A A K I L S Y N R A N
1380                               1400                               1420

```

FIG. 1G

CCGAGTCGTGGCCATTCTCTGCAACCATCAGCGAGCAACCCCCAGTACGTTCCGAGAAGTC
-----+-----+-----+-----+-----+-----+-----+
GGCTCAGCACCGGTAAGAGACGTGGTAGTCGCTCGTTGGGGTCATGCAAGCTCTTCAG
R V V A I L C N H Q R A T P S T F E K S
1440 1460 1480

GATGCAGAAATCTCCAGACGAAGATCCAGGCAAGAAGGAGCAGGTGGCTGAGGCCAGGGC
-----+-----+-----+-----+-----+-----+-----
CTACGTCTTAGAGGTCTGCTTCTAGGTCGTTCTCTCGTCCACCGACTCCGGTCCCCG
M Q N L Q T K I Q A K K E Q V A E A R A
1500 1520 1540

AGAGCTGAGGAGGGGCTGAGCACAAAGCCCAAGGGGATGGCAAGTCCAGGAGTGT
 TCTCGACTCCTCCCGCTCCGACTCGTGTTCGGGTTCCTTACCGTTCAGGTCCTCACA
 E L R R A R A E H K A Q G D G K S R S V
 1560 1580 1600

CCTGGAGAAAGAGCGGCTCCTGGAGAAGCTGCAGGAGCAGCTGGCGCAGCTGAGTG
-----+-----+-----+-----+-----+-----+-----
GGACCTCTTCTTCGCCGAGGACCTCTTCGACGTCTCGTCCGCGTGGACTCACAL
L E K K R R L L E K L Q E Q L A Q L S V

FIG. 1H

GCAGGCCACGGACAAGGAGGAGAACAGCAGGTGGCCCTGGGCACGTCCAAGCTCAACTA
CGTCCGGTGCCCTGTTCCCTCCTCTGTTGTTCCACCGGACCCGTGCAGGTTCCGAGTTGAT
Q A T D K E E N K Q V A L G T S K L N Y
1680 1700 1720
CCTGGACCCAGGATCAGCATTCCTCGTGCAAGCGGTTCAGGGTCCAGTGCGAGAAGAT
GGACCTGGGTCCTAGTCGTAAACGGACCAACGTTCCGCCAAGTCCCACGGTCACCTCTTCTA
L D P R I S I A W C K R F R V P V E K I
1740 1760 1780
CTACAGCAAAACACAGCGGAGAGGTTCCCTTGGCTCTCGCCATGGCAGGAGAAGACTT
GATGTCGTTTTGTGTCGCCCTCTCCAAGCGGACCCGAGAGCGGTACCGTCCCTCTCTTGAA
Y S K T Q R E R F A W A L A M A G E D F
1800 1820 1840
TGAAATTCTAACGACGAGCCGTGTTGAAACTTCTTTTGTATGTGTGTGTGTTTTTCAC
ACTTAAGATTGCTGCTCGGCACAACTTTGAAGAAAACATACACACACACAAAAAAGTGA
E F * 1880 1900
1860
ATTAAGCAGTACTGGGAATTTGTACAATAAAAAAATAAAAAAATAAAAAA
TAATTTGTCATGACCCCTTAAACATGTTATTTTCTTTTCTTTTCTTTTCTTTTCTTTT

FIG. 2A

```

VRLRLRAALTL.....LGEVPRRPAS
: . | | | . . :
IKPLKRPRDEDDVDYKPKIKTEDTKKEKKRKL EEEEDGKLKPKNKDKD

RGVPGSRRTQKSG.....ARWEKEKHEDGVKWRQLEHKGPYFAPPYE
: | | . . . | . : | | . . . : | | | | | | | | | |
KKVPEPDNKKKKPKKEEEQKWKWWEERYPEGIKWKFL EHKGPVFAPPYE

PLPDGVRFYEGRPVRLSVPAEEVPTFYGRMLDHEYTTKEVFRKNFFNDW
| | | . : | | : | | . : | | | | | | | | | | | | | |
PLPENVKFYDGVKVMKLSPKAEVATFFAKMLDHEYTTKEIFRKNFFKDW

RKEMAVEEREVIKSLDKCDFTEIHR YFVDKAAARKVLSREKQKLKEEAE
| | | . | | : . : | | | | | | | | | | | | | | | | |
RKEMTNEEKNIITNLSKCDFTQMSQYFKAQTEARKQMSKEEKLKIKEENE

KLQQEFGYCILDGHQEKIGNFKIEPPGLFRGRGDHPKMGLKRRITPEDV
| | . : | | : | | . : | | | | | | | | | | | | | | | |
KLLKEYGFCIMDNHKERIANFKIEPPGLFRGRGNHPKMGLKRRIMPEDI

```

FIG. 2B

VINCSRDSKIPEPPAGHQKEVRSDNTVTWLAAWTESVQNSIKYIMLNPC
:
IINCSKDAPSPPPGCHKWKEVRHDNKVTWLVSWTENIQGSIKYIMLNPS

SKLKGETAWQKFETARRLRGFVDEIRSQYRADWKSREMKTRQRAVALYFI
I::III..III:IIII: II..III..III:III:IIII:IIII:IIII
SRIKGEKDWOQYETARRLLKCVDDKIRNQYREDWKSREMKVPRQRAVALYFI

DKLALRAGNEKEDGEAADTVGCCSLRVEHVQLHPEADGCQHVVFFDLGK
 :
 DKLALRAGNEKEEGETADTVGCCSLRVEHINLHPELDGOEYVVFDFLGK

DCIRYYNRPVEKPVYKNLQLFMENKDPRDDLFDRLTTSLNKHLQELMD
 1:1111:1111.1:1111111111:11111111.11111111:
 DSIRYYNKVPVEKRVFKNLQLFMENKQPEDDLFDRLNTGII NKHLQDLME

FIG. 2C

GLTAKVFRYNASITLQEQQLRALTRAEDSIAAKILSYNRRANRVVAILCNH
 ||||| ||||| ||||| : || : || : ||||| ||||| . ||||| |||||
 GLTAKVFRYNASITLQQQLKELTAPDENIPAKILSYNRRANRAVAILCNH

Q R A T P S T F E K S M Q N L Q T K I Q A K K E Q V A E A R A E L R R A R A E H K A Q G D G K S R S
| | | . | . | | | | | | | : | | | : | | | : | . | : | . :
Q R A P P K T F E K S M M N L Q T K I D A K K E Q L A D A R R D L K S A K A D A K V M K D A K T K K

VLEKKRRLLLEKQEQLAQLSVQATDKENKQVALGTSKLNLYLDPRI
IAW
| : | . : : : : | . | . | . | . | . | . | . | . | . | . : |
VVESSKKKAQVRLEEQLMKLEVQATDREENKOIALGTSKLNLYLDPRI
TVAW

CKKRWGVPVEKIYKTKQREKFAWAIDMADEDYEF
 CKKRWGVPVEKIYKTKQREKFAWALAMAGEDYEF